

NOTES ON MESEMBRYANTHEMUM AND ALLIED GENERA

By H. M. L. BOLUS.

Astridia speciosa.—Planta 1 visa, ca. 20 cm. alta; partes herbaceae velutinae; folia supra visa oblonge ovata vel oblique ovata vel lanceolata, obtuse carinata, lateribus leviter convexis, lat. visa semi-ovata, (pari interdum circulum fere formante), vel oblonge semi-ovata, obtusa vel apice subrotundata, duo paris leviter inaequilonga, ad 6.5 cm. longa, medio ad 1.6 cm. lata diametroque ad 2 cm.; flos 1 visus, subsessilis, 6.5 cm. diam.; bractae lat. visae oblique ovatae acutae, 1.3 cm. longae, ad 8 mm. diam.; receptaculum globose obconicum, 6.5 mm. longum, ad 9 mm. diam.; sepala 6, e prope basim gradatim angustata, acuta, omnia apice $\pm$ subulata, 2 extima 8—9 mm. longa, basi 5—6 mm. lata, cetera 9—10 mm. longa, basi 4—5 mm. lata ampleque marginata; petala 6-seriata, exteriora inferne e prope medium angustata, obtusa vel emarginata, rubre aurantiaca, ad 3.2 cm. longa, 2—3 mm. lata, interiora 1—2 cm. longa, 0.25—1 mm. lata, acuta vel acuminata, gradatim in staminodia abeuntia; staminodia pauca, stamina conice conferta saepius excedentia; filamenta ca. 6-seriata, ad 1.1 cm. longa, inferne pallida, superne lutea, exteriora inferne ciliate papillata, intima paulo supra medium papillata, antheris pollineque aureis; discus conspicuus; ovarium circa marginem fere planum, medio abrupte 6-lobatum, lobis valde compressis, fere ad 2 mm. elevatis; stigmata 6, gracilia, superne longe attenuata, 1—1.2 cm. longa; semina non visa.

South West Africa: "5 miles N. of Sendlings Drift", March 1960, *H. Hall* 1869. Fl. Jun. 1960. N.B.G. 175/60.

***Conophytum complanatum* (*Piluliformia*)**.—Glabrum; vaginae persistentes pergamentaceae, inferne brunneae, superne griseae, brunneo punctatae, senectae papyraceae, saturate brunneae, senectissimae atratae; corpuscula obovata vel clavata tumque basi stipitata, supra fere circularia, complanata, rarius immaculata, costa leviter elevata, e medio oris oriente et ad marginem attingente interdumque linea obscura punctarum approximatarum ornata, deinde e medio hujus lineae linea altera punctarum, leviter curvata, oriente adque extremitatem oris attingente, rarius punctis sparsis saturatiore viridibus additis, 7—11 mm. longa, apice ad 6 mm. lata, ad 7 mm. diam., ore leviter depresso, glabro, ad 1.5 mm. longo; bractae obtusae, pedunculum 2 mm. inclaudentes, basim receptaculi 1.5 mm. longi, 2 mm. diam., attingentes; calyx subherbaceus, 3—4 mm. longus, tubo ad 2 mm. longo, dimidio incluso, segmentis 4,

obtusis vel acutis, brunneis, rubre papillois, 1.5—2 mm. longis; corolla 6—7 mm. longa, tubo cylindrico pallido, ad 4 mm. longo, segmentis 2—3-seriatis, acutis vel acuminatis, aureis vel aurantiacis, vel rarissime albidis, marcescentibus, ad 3 mm. longis, 0.25—0.5 mm. latis; stamina ca. 14, 2-seriata, supra medium tubi adnata, albida, filamentis brevissimis, antheris 1.25 mm. longis, omnibus $\pm$ manifestis; discus conspicuus, fere ad 0.5 mm. elevatus; ovarium conice elevatum, discum leviter excedens; stylus pallidus, 0.75 mm. longus, stigmatibus 4, obtusis rubris, 1.5 mm. longis.

Cape Province: in dit. Prince Albert; Laingsburg, Oct. 1959, *R. C. Littlewood*. Karoo Garden 803/59. Fl. Apr. 1960.—*C. calitzdorpensi* valde affine fortasseque varietas mera.

Conophytum membranaceum (*Subrisa*).—Planta cum floribus 3 cm. alta, 5.5 cm. diam.; corpuscula dense conferta, subovalia vel subobovata vel subpiriformia, supra convexula, ore leviter depresso, glabro, sine fossis terminalibus, 2.25 mm. longo, immaculata, sat pallide viridia, 4—6 mm. longa, apice 4—5 mm. diam.; flores nocturni fragrantissimi; pedunculi 2—3 mm. longi, bracteis basalibus papillatis, 0.75 mm. longis; receptaculum globosum, 1 mm. longum; calyx omnino exsertus, 3—4 mm. longus, membranaceus (itaque nomen) vel segmentis 4, in alabastris partim herbaceis papillatisque, obtusis aequilongis, 1 mm. longis, mox marcescentibus membranaceisque; corolla 8—11 mm. longa, tubo cylindrico, 3—5 mm. longo, segmentis 3-seriatis, exterioribus acutis vel obtusis, rubre aurantiacis vel cupreis, 0.5 mm. latis, interioribus obtusis, luteis vel aureis; stamina 2-seriata, e parum supra medium orientia, antheris omnibus manifestis, luteis; discus conspicuus, profunde divisus, segmentis ca. 7, subtruncatis, saturate viridibus; ovarium planum, medio tantum leviter elevatum ibique ad medium disci vix attingens; stylus viridis, 0.75 mm. longus, stigmatibus 4, gracillimis purpureis, fere ad 2.5 mm. longis.

Cape Province: Namaqualand; “20 miles S. of Port Nolloth, Nov. 1960, *H. Hall* 2165. N.B.G. 1010/60. F. Jan.—Feb. 1961.

Conophytum longitubum (*Euconophytum*).—Planta 1 visa, compacta, 2 cm. alta, 3.5 cm. diam.; reliquiae inferne papyraceae brunneae, “nervis” sat conspicuis, superne saturatiores vel demum atratae; corpuscula 8—11 mm. longa, 6—9 mm. diam., obconica velpiriformia, minutissime papillata, lateribus saepe purpureis, supra circularia vel elliptica si duo in vagina evoluta sunt, leviter convexa, sordide viridia, punctata, punctis ad 0.5 mm. diam., saturatoribus, sparsis vel 2—4 approximatis lineamque brevem formantibus, ore ad 2 mm. longo, subridente, minute ciliato, ciliis sat profunde positis, supra visis patentibus; pedunculus 3—4 mm. longus, basi bracteatus, bracteis inter maximas in hac sectione visis,

ad 4 mm. longis, herbaceis, lobis obtusis papillatis, tubum aequantibus, sinu lato; receptaculum globosum, ad 3 mm. diam.; calyx in alabastro herbaceus, 7 mm. longus, tubo 5 mm. longo, segmentis 4, 1—2 mm. longis, interioribus anguste membranaceo marginatis, demum in flore maturo submembranaceus; corolla alba, 1—1.2 cm. longa, tubo 5—6 mm. longo, segmentis 3—4-seriatis, obtusis, 0.5—0.75 mm. latis; stamina 3-seriata, omnia exserta, infima parum supra medium tubi posita, filamentis albis, antheris pallidissime stramineis; discus brevissime divisus, segmentis ca. 9, truncatis, fere integris; ovarium profunde concavum, medio conice elevatum, altitudinem disci attingens; stylus 0.5 mm. longus, stigmatibus pallide purpureis, 1—1.5 mm. longis.

Cape Province: in dit. Worcester; "on the farm Avondrust, 4 miles E. of Touw's River", Maio 1959, *R. C. Littlewood*. Karoo Garden 91/59. Fl. Apr. 1960.—"This is confined to one koppie of a group of seven, which are surrounded by an area of flat sandy ground that extends for miles. There is no link with any of the mountain ranges". (*Littlewood*.)

Lampranthus francisci.—Erectus glaber, sat robustus, 60 cm. altus, 90 cm. diam.; caulis 3 cm. diam.; rami primarii 25—30 cm. longi, 4—6 mm. diam., internodiis 2.5—6 cm. longis; ramuli ultimi saepe 6—8-foliati; folia ascendentia, supra plana, carinata, lateribus convexis, lat. visa prope apicem tantum angustata, breviter apiculata, fere levia, tactu subvelutina, sat pallide viridia, 2.5—4.5 cm. longa, medio 3—6 mm. lata, 4—6 mm., vel rarissime ad 7 mm., diam. tumque subfalcata, vagina 4—5 mm. longa, interdum inconspicue impressa lineata; cymae 3—4-ternatae, 4—7 cm. longae, 5—9 cm. diam., 11—25-florae, pedunculis 4—5 cm. longis, ultimis 6—12 mm. longis, lateralibus prope medium bracteatis, bracteis 3—10 mm. longis; flores odorati, 3—4.3 cm. diam.; receptaculum obconicum, 4—5 mm. longum, 5—6 mm. diam.; sepala 5, acuta, omnia $\pm$ marginata, subaequilonga, exteriora 5—6 mm. longa, basi 3—7 mm. lata; petala 2-seriata, subaequilonga, inferne leviter vel vix angustata, obtusa, pulchre rosea, sicca inconspicue vittata, ad 1.3 cm. et 1.8 cm. longa, 0.75—1.25 mm. lata; staminodia nulla; filamenta 5—6-seriata, alba, 1—5 mm. longa, exteriora nuda, interiora paulo infra medium dense papillata, antheris 0.75 mm. longis, cum polline stramineis; discus sat inconspicuus crenulatus; ovarium circa marginem concavum, lobis erectis approximatis obtusis nitentibus, ad 1.5 mm. elevatis; stigmata 5, subulata, breviter caudata, ad 4 mm. longa; capsulae hornotinae multae visae, rubre brunneae, infra obconicae, in pedunculo gradatim abeuntes, ad 5 mm. longae, supra ad 2 mm. elevatae, suturis subringentibus, 7—9 mm., expansae ad 1.3 cm., diam., valvis late patentibus, carinis erectis integris, basi parallelis, superne divergentibus,

medium valvae vel paulo ultra attingentibus, arista vix visa, alis amplis dimidio superiore libero, apicem valvae attingentibus, alis tegentibus dimidium loculi attingentibus; semina obovata levia, pallide brunnea, 1 mm. longa.

Cape Province: in dit. Ceres; Karooport, Mart. 1960, *Frank J. Stayner*. Karoo Garden 240/60. Fl. Nov. 1960.

Lampranthus littlewoodii.—Glaber, laxe parceque ramosus ("straggling"), 23 cm. altus, 35 cm. diam.; caulis basi 8 mm. diam.; partes herbaceae leves, pallide glaucae virides; rami primarii ad 16 cm. longi, internodiis 2—4 cm. longis, ad 3 mm. diam.; ramuli ultimi crebre 12—14-foliati; folia fere erecta, demum patentia, saepe subfalcata, supra plana acuta, dorso rotundata vel cum aetate subcompressa obscureque obtuse carinata, lateribus subconvexis, lat. visa obtusa vel subacuta, interdum superne leviter ampliata, 1—2.5 cm. longa, medio 1.5—2 mm. lata, 2—3 mm. diam., vagina 1 mm. longa; flores 3-nati vel 2-ternati, meridiani, 2.3—3 cm. diam.; pedunculi teretes, 1—1.5 cm., vel rarius ad 2 cm., fructiferi ad 3 cm., longi, omnes prope medium bracteati, bracteis foliis simillimis, 5—7 mm. longis; receptaculum obconicum, 4 mm. longum, ad 5 mm. diam.; sepala 5, e paulo supra basim angustata, superne $\pm$ subulata, acuta vel acuminata, 4—5 mm., vel 5—6 mm. longa, basi 1.5—2 mm., vel 2—3 mm., lata, interiora exterioribus interdum latiora, ample brunneo marginata; petala pulchre rosea, exteriora ca. 3-seriata, inferne sat conspicue angustata, saepius obtusa, 1—1.4 cm. longa, 1—2 mm. lata, interiora 3—4-seriata, gradatim angustiora, inferne non vel vix angustata, acuta vel obtusa, 4—8 mm. longa, 0.25—0.5 mm. lata; staminodia vera nulla sed petala intima diu erecta, ad basim staminum subappressa; filamenta mox suberecta, 3—4-seriata, pallide rosea, 2—4 mm. longa, extima nuda, intima prope basim dense papillata, antheris pollineque pallide stramineis; discus crenulatus; ovarii lobi sat distantes, obtuse compressis, ad 0.75 mm. elevati; stigmata 5, profunde posita, viridia, inter minima in genere, 1.5 mm., vel vix ad 2 mm., longa cum cauda 0.75 mm.; capsula infra obconica, 5—6 mm. longa, supra ad 2 mm. elevata, suturis leviter compressis, 6—7 mm., expansa 9—10 mm., diam., valvis late patentibus, carinis fere erectis, e basi divergentibus, dimidium valvae attingentibus, minute lacerulatis, arista minuta, alis apicem valvae attingentibus vel paulo brevioribus.

Cape Province: Namaqualand; "2 miles N. of Khamieskroon", Oct. 1959, *R. C. Littlewood*. Karoo Garden 581/59. Fl. Nov.—Dec. 1960.

Lampranthus subtruncatus (§ *Tenuifolii*) L. Bol., "Mesemb." III, 159 (1939)—var. **wupperthalensis**.—Rami 3 visi compacti, ad 23 cm. longi, sat rigidi, crebre ramulosi; folia primaria matura vel delapsa ad

2.5 cm. longa, cicatricibus triangulis acutis; stigmata ad 2.5 mm. longa; capsulae plures visae (in forma typica non descriptae), infra 5—7 mm. longa, 8—10 mm. diam., obconicae 5-angulatae, costis 5 alternantibus, pallide brunneae, supra saturate brunneae, per 2 mm. elevatae, suturis leviter, vel versus medium capsulae sat valde, compressis, expansae ad 1.4 cm. diam., valvis late patentibus, carinis e basi divergentibus, deinde incurvatis, aristis contiguis fereque apicem valvae attingentibus, marginibus lacerulatis, 1.5 mm. latis; semina fere circularia, muricata, saturate brunnea, ca. 1.25 mm. longa.

Cape Province: in dit. Clanwilliam; Wupperthal, Sept. 1959, *R. C. Littlewood*. Karoo Garden 380/59. Fl. Nov. 1960, fruct. Feb. 1961.

Opophytum australe.—Plantae in horto a seminibus ortae; rami vivi plures visi, ad 25 cm. longi, ad 1 cm. diam., internodiis 1—3 cm. longis; partes herbaceae leves, laete virides, minutissime papillatae, papillis nec elevatis nec nitentibus; folia alterna, supra leviter convexa vel plana vel “cum aetate leviter concava,” dorso rotundata, “1.2—6.6 cm. longa, 5—8 mm. diam.”; flores per diem noctemque expansi; pedunculi 1—3 cm. longi, 4—7 mm. diam.; receptaculum globose obconicum, 9 mm. longum, 10 mm. diam.; calycis tubus 6—7 mm. longus, segmentis valde inaequilongis, 3 foliaceis subteretibus, 1—2 cm. longis, 4—5 mm. diam., 2 intimis fere omnino membranaceis, 5—8 mm. longis; corolla ad 8 cm. longa, tubo pallide viridi, ca. 2 cm. longa, segmentis pluriseriatis, basi 0.75 mm. latis, superne capillaribus roseis; staminodia staminaque multiseriata, filamentis ad 1.5 cm. longis, antheris pollineque pallide luteis; fossae nectariferae ad 4 mm. longae; ovarium obtuse 5-angulatum, ad 6 mm. pyramidate elevatum, parte ovulifera fere inferiore; stigmata 5, gracilia, ad 1.8 cm. longa; capsulae 6 visae, pallidae, 1.4—1.6 cm. longae, infra subclavatae, conspicue obtuseque 5-angulatae, suturis compressis, supra ad 1 cm. elevatae, ad 1 cm., vel expansae 2.2 cm., diam., valvis celerrime (*within 30 seconds*) patentibus (alis erectis) recurvatisque (alis patentibus), carinis arte appressis, minutissime serrulatis, ad 1.25 mm. altis, partem tertiam valvae attingentibus, alis omnino coalitis vel prope apicem liberis, saepe breviter lobatis, apicem carinarum attingentibus; semina permulta, fere rotundata, pallida, micropyla brunnea, ad 1 mm. longa.

Cape Province: Namaqualand; “21 miles N. of Khamieskroon, May 1960, *R. C. Littlewood*. Karoo Garden 961/60. Fl. Jan. 1961. “No cultivation whatever was given to the plants in the Karoo Garden.”

The following collections from Namaqualand, represented in the Bolus Herbarium and arranged in chronological order, have calyx-segments similar to those of the species described above—(1) *M. Schlechter*

7. (2) *Percy Sladen Memorial Expedition* 5986. (Sandy river-bed between Modderfontein and Doornpoort.) Common from Chubiessis outspan to Daunabis. (3) *Pillans*, (1 mile S.E. of Viols' Drift, Sept. 1931). (4) *Leighton* 2862. (Richtersveld, Hell's Kloof, in sand, Dec. 1946). (5) *H. Meyer*. Soebatsfontein, Sept. 1950.

The first of these bears the MS. name "*M. gariepinum*" and is without fruit. My brief notes on the second were published in 1913 (Ann. S.A. Mus. IX, 151) with the remark that "until fresh material is available it seems advisable not to name it". In 1928 (Gard. Chron. 84,253) N. E. Brown enumerated 5 species of *Opophytum*, among them being "*O. speciosum* N.E. Br. (described without a name in the Ann. S. Afr. Mus. IX, 151 and will be described fully later on)." This description was not published, and complete living material from that area is still required before a satisfactory one can be made. Meanwhile, as the only capsule (an imperfect one) on our specimen of 5986 has much shorter valves than those of K. G. 961/60, and with the keels reaching the middle of the valve, and as the corolla of the latter is much longer and its segments pink, and especially as there is excellent material to deal with, this most southerly collection is described as a new species. The three remaining collections are without fruit, but are probably forms of this species.

Included in the 5 species of *Opophytum* enumerated by N. E. Brown is *Mesemb. fastigiatum* Thunb. This is described by Thunberg as having the leaves opposite, ovate, connate, papulose, about 1 inch long," and is obviously misplaced in this genus. It might be the same as the earlier *Micropterum papulosum* (L.f.) Schwant.

***Psilocaulon candidum*.**—Glabrum, "33 cm. altum, ad 1·30 met. diam." (*Littlewood*); rami inter gracillimos in genere, 30—40 cm. longi, 1—2 mm., vel rarius ad 3 mm., diam., nodis leviter constrictis, internodiis saepius 1·5—2 cm. longis, minute papillatis, papillis subelevatis ellipticis, ramuli floriferi interdum fastigiati; folia dorso rotundata, ad 1·6 cm. longa; flores meridiani, ad 1·5 cm. diam.; pedunculi graciles, 5—10 mm. longi, in receptaculum anguste obconicum, ad 2·5 mm. longum, 2—3 mm. diam., gradatim abeuntes; calycis tubus 0·75 mm. longus, segmentis 5, in alabastro apice subincrassatis, acutis, novellis apiculatis, omnia $\pm$ marginatis, 3—4 mm., vel 4—5 mm., longis, basi 1·5—2 mm. latis; corollae segmenta 2—3-seriata, inferne vix angustata, acuta vel obtusa, candida, apice interdum pallide roseo suffusa, ad 6 mm. longa, 0·5—0·75 mm. lata; staminodia hyalina, alba vel apice fusca, fere integra vel inconspicue lacerulata, exteriora laxa, interiora appressa, 5 mm. longa, vix ad 1 mm. lata; filamenta ca. 4-seriata, candida, antheris pollineque stramineis; ovarium obtuse angulatum, ad 1·5 mm. elevatum; stigmata 5, gracillima, 3·5—4 mm. longa.

Cape Province: Namaqualand; Ratel Poort, Oct. 1959, *R. C. Littlewood*. Karoo Garden 631/59. Fl. Nov.—Dec. 1960.

Psilocaulon namaquense Schwant., Gfl. (1928) 69; N.E.Br., Gard. Chron. (1928 II) 254. *Mesembryanthemum simile* Sond. var. *namaquense* Sond., Flor. Cap II, 435 (1862).—Glabrum, ad 90 cm. altum, ca. 1·30 met. diam.; rami primarii ad 44 cm. longi, internodiis 2·5—3 cm. longis, 2—4 mm. diam.; partes herbaceae leves politaeque, sat sordide virides; folia dorso rotundata, lat. visa prope apicem angustata, acuta, ad 2 cm. longa, 1·5—2·5 mm. diam., flores meridiani, 1·3—1·5 cm. diam.; pedunculi in receptaculum 2—3 mm. longum, 3—4 mm. diam., gradatim abeunt; calycis tubus ca. 0·5 mm. longus, segmentis 5, in alabastris saepius subaequilongis, maturis dorso convexis, saepissime acuminatis, apiculatis, omnibus ± marginatis, marginibus intimis amplis, 4—6 mm. longis, basi 1—2 mm. latis, vel in flore altero 4—6 mm. longis, basi 2—3 mm. latis; corollae tubus vix 0·5 mm. longus, segmentis 2-seriatis, inferne non vel vix angustatis, obtusis purpureo-roseis, 4—6 mm. longis, 0·5—1 mm. latis; staminodia stamina subaequantia, inferne alba, superne pallide rosea, integra vel inconspicue lacerulata, ad 0·75 mm. lata; filamenta 3-seriata alba, ad 4 mm. longa, antheris pollineque stramineis; ovarium obscure angulatum, ad 1 mm. elevatum; stigmata 5, gracillima pallida, 3 mm. longa.

Cape Province: Namaqualand; Ratel Poort, Oct. 1959, *R. C. Littlewood*. Karoo Garden 607/59. Fl. Nov.—Dec. 1960.

The first publication (about 100 years ago) of this name was used by Sonder to denote a variety, which has since been raised to specific rank. Nothing, however, seems to have been added to Sonder's brief description. The notes given above were made on ample and excellent material which match specimens of *M. Schlechter* 36 (Steinkopf, Nov. 1897) that were compared with a photograph of the type of ***P. namaquense***. The identification is therefore somewhat doubtful, but it does not seem possible to make it more exact when dealing with scanty dried material only and with no precise locality given beyond "Namaqualand".

Psilocaulon littlewoodii.—Glabrum, "ca. 16 cm. altum, 80 cm. diam.; caulis 8—10 mm. diam."; partes herbaceae vivae minute papillatae, papillis politis, saepius circularibus, in siccis invisibilibus, vel in receptaculo et calyce nitentibus; rami decumbentes vel prostrati, ad 35 cm. longi, crebre ramulosi, cum ramulis ascendentibus vel fere erectis, flexuosi, nodis saepius valde constrictis, internodiis saepius ad 3—10 mm. longis et ad 2 mm. diam.; ramuli ultimi cum floribus saepius 1—2·5 cm. longi; folia supra plana, dorso rotundata, lateribus convexis, lat. visa prope apicem abrupte angustata, apiculata, ad 1 cm. longa, ad 2·5 mm. diam.;

flores crebri meridiani, ad 1 cm. diam.; pedunculi saepius 2—5 mm. longi, a receptaculo obconico, 1.5—2 mm. longo, 2—2.5 mm. diam., vix distincti; calycis tubus brevissimus, segmentis 5, acutis vel extimo obtuso, intimo acuminato, 3—4 mm. longis, basi 0.75—2 mm. latis, 3 marginatis; corollae segmenta ca. 3-seriata, inferne non angustata, obtusa, purpureorosea vel fere subrubicunda, 3—5 mm. longa, ad 0.25 mm., vel rarius ad 0.5 mm., lata; staminodia prope apicem attenuata, saepe tenuiter acuteque lacerata, prope basim subhyalina alba, superne rosea, stamina excedentia; filamenta 2—3-seriata, pallide rosea; ovarium sat obtuse 5-angulatum, ad 1 mm. elevatum; stigmata 5, gracillima, pallide rosea, ad 2.5 mm. longa.

Cape Province: in dit. Vanrhynsdorp; "8 miles N. of Vanrhynsdorp," Oct. 1959, *R. C. Littlewood*. Karoo Garden 591/59. Fl. Nov.—Dec. 1960.

P. littlewoodii forma.—Habitus laxior robustiorque quam in forma typica; rami ramulique minus flexuosi, internodiis ad 3 cm. longis, ad 4 mm. diam.

Cape Province: in dit. Vanrhynsdorp; "6 miles E. of Vredendal" Sept. 1959, *R. C. Littlewood*. Karoo Garden 629/59. Fl. Nov.—Dec. 1960.

Psilocaulon oculatum.—Glabrum, "3 feet in diameter, inclined to sprawl" (Littlewood); partes herbaceae minutissime crebreque papillatae, papillis leviter elevatis politis; rami laxi ramulosi, internodiis 8—20 cm. longis 1.5—3 mm. diam.; ramuli ultimi floriferi ascendentes, 2—5 cm. longi; folia supra sulcata acuta, dorso rotundata, lat. visa superne vix angustata, obtusa, ad 2 cm. longa, 2—3 mm. lata diametroque; flores meridiani, 1.5—1.8 cm., vel demum post dies plures ad 2 cm., diam.; pedunculi in floribus maturis a receptaculo obconico, 2 mm. longo, 3 mm. diam., distincti, saepius 3—5 mm. longi; calycis tubus ca. 0.5 mm. longus, segmentis 5, extimis superne subteretibus, acutis vel obtusis, medio leviter constrictis, interioribus acutis vel acuminatis, in alabastro saepe valde inaequilongis, exterioribus ad 8 mm., intimis 3 mm., longis, in flore maturo 3—6 mm., vel 4—6 mm., vel 5—8 mm., longis, basi 1.5—2.5 mm. latis; corollae tubus brevissimus, segmentis 2—3-seriatis, inferne non, vel leviter, angustatis, obtusis, dimidio inferiore albo, oculum formante, superiore pulchre roseo, vel intimis albis, in staminodia abeuntibus, 6—9 mm. longis, 0.5—1 mm. latis; staminodia hyalina, obtusa vel acuta vel acute lacerulata, ad 6 mm. longa, ad 1 mm. lata; filamenta 3—4-seriata, alba, ad 6 mm. longa, antheris pallide stramineis; ovarium acute subprofundeque 5-angulatum, minute papillatum, ad 1.5 mm. elevatum; stigmata 5, gracilia, longe attenuata, ad 4 mm. longa; capsulae multae visae, infra obconicae, 2 mm. longae, supra ad 3 mm. elevatae,

suturis compressis, ad 4 mm., expansae 8—10 mm., diam.; semina compressa, fere semicircularia, embryone muricato, saturate brunnea, 1 mm. diam.

Cape Province: in dit. Clanwilliam; prope Clanwilliam, Oct. 1959, *R. C. Littlewood*. Karoo Garden 640/59. Fl. Nov.—Dec. 1960.

Psilocaulon simulans.—"Plantae prostratae, maximae visae ca. 90 cm. diam., dense floriferae" (*Stayner*); partes herbaceae minutissime papillatae, tactu leves, siccae subasperulae; nodi in ramulis florentibus saepius non constricti internodiaque 1—2.5 cm. longa, in ramulis sterilibus, saturate olivaceis, conspicue constricti, internodiaque 4—6 mm. longa; folia novella tantum visa, dorso rotundata, 5—6 mm. longa, 1 mm. diam., in ramulis florentibus marcescentia, ad 1.3 cm. longa, in ramulis seriore producta ad 2.6 cm. longa, 2—3 mm. diam.; flores ad 1.2 cm. diam., in ramulis ultimis, saepius 1.5—2.5 cm. longis, dispositi; pedunculi a receptaculo 2 mm. longo, 3 mm. diam., vix distincti, 1—7 mm., fructiferi ad 15 mm., longi; calycis tubus ad 0.75 mm. longus, segmentis 5, obtusis vel intimo acuto, omnibus + marginatis, 2—3 mm., vel 3—4 mm., longis basi 1—2 mm. latis; corollae tubus brevissimus, segmentis 2-seriatis, prope basim leviter angustatis, obtusis aureis, 4—5 mm. longis, ad 1 mm. latis; staminodia nulla; stamina 3-seriata, primum erecta, mox late patentia (ovario ab initio bene exposito), lutea, ad 3 mm. longa; ovarium acute, sed non profunde, angulatum, ad 1.75 mm. elevatum; stigmata 5, subulata aurea, 0.75 mm. longa (brevissima in genere visa); capsula supra ad 2 mm. elevata, valvis ringentibus, apice 3 mm., expansa 6 mm., diam.; semina late obovata, saturate brunnea, vix ad 0.5 mm. longa.

Cape Province: in dit. Beaufort West; "21 miles S. of Beaufort West on the road to Klaarstrom", Nov. 1, 1960, *F. J. Stayner*. Karoo Garden 806/60.

The flowers of this species closely resemble those of ***Mesembryanthemum excavatum*** L. Bol. and of ***M. chrysium*** L. Bol., the latter differing from the other two in having more slender and longer stigmas. The absence of staminodes in all three cases makes them anomalous in both genera. Vegetatively the first two having leaves mostly alternate, and herbaceous parts crystalline papillose, are in accord with ***Mesembryanthemum***, and the last has the consistently opposite leaves and constricted nodes of ***Psilocaulon***. The name *simulans* (= imitating) refers to the remarkable resemblance existing between these flowers and those of the two earlier species.

Psilocaulon stayneri.—Plantae glabrae, "50 cm. altae, 1 met. diam."; rami primarii vivi plures visi; ad 59 cm. longi, ad 4 mm. diam., nodis vix constrictis, internodiis 5—6 cm. longis, laxe copioseque ramulosi;

ramuli ultimi 2—4 cm. longi, saepe 6—7-fl., novi steriles nodis constricti; partes herbaceae pallide olivaceae, minutissime papillatae, papillis non, vel rarius leviter, elevatis; folia fere erecta vel patentia, subteretia, lat. visa apice leviter angustata apiculataque, 4—16 mm. longa cum vagina 0·5 mm., novella ad 3 mm., matura 2 mm., diam.; flores per diem noctemque expansi, ad 1·6 cm. diam.; pedunculi crassi, a receptaculo 2—3 mm. longo, 3—4 mm. diam., non vel vix distincti, saepius 3—5 mm. longi, 2—3 mm. diam.; calycis tubus ad 1 mm. longus (in genere longus), segmentis 5, in alabastris subteretibus saepeque valde inaequilongis, exterioribus ad 6 mm., interioribus 2—3 mm. longis, in flore maturo submarcescentibus, 1·5—3 mm. vel 2—4 mm. longis, basi 1—2·5 mm. latis, omnibus $\pm$ marginatis; corollae tubus ca. 1 mm. longus, segmentis 3-seriatis, laxissime positus, obtusis, primum pallidissime, deinde paulo saturiore, roseis, ad 6 mm. longis, 0·25 mm., vel apice ampliatis ad 0·5 mm., latis (inter angustissima in genere); staminodia crebra, diu appressa, obtusa, integra vel apice $\pm$ lacerulata, hyalina, staminibus longissimis aequilonga vel paulo breviora, ad 1 mm. lata; filamenta ca. 3-seriata, complanata, ad 4—5 mm. longa, antheris pollineque pallidissime stramineis; ovarium sat acute angulatum, 0·75—1·5 mm. elevatum; stigmata 5, intus aurea, 4—5 mm. longa.

Cape Province: in dit. Calvinia; "30 miles N. of Nieuwoudtville" Dec. 1959, *F. J. Stayner*. Karoo Garden 893/59. Fl. Nov.—Dec. 1960.

Correction.

The combination **Psilocaulon otzenianum** (Dtr.) L. Bol. "Mesemb." II, 31 (Dec. 1928) is erroneous, the error being the result of a label (*Dinter* 3789) belonging to a species of **Lampranthus** being attached to a specimen, of a **Psilocaulon**. The confusion was discovered by Dr. Friedrich and was mentioned by him in a letter to Mr. Herre, who has kindly drawn my attention to it. The masquerading **Psilocaulon** is still to be determined. As far as I am aware **M. otzenianum** Dtr. has not yet been published as a **Lampranthus**. It was described in Aug. 1923 (*Fedde. Repert.*, Band XXIII, 152), and according to the description (we have not seen the type) it seems to be the same as **M. spathulatum** L. Bol. which is probably only a larger-flowered form of **Lampranthus uniflorus** (L. Bol.) L. Bol., published in Sept. 1922 as **Mesemb. uniflorum** (*Ann. Bol. Herb.* III, 135).

Stoeberia apetala.—Planta 1 visa, glabra, 17 cm. alta, parte inferiore compacta, ramis sterilibus ramulisque crebre foliatis, foliis hornotinis 2—4 vel rarissime ad 6, ramis florentibus elongatis, cum floribus 12 cm. longis, internodiis senectis ad 3 cm. longis, 2 mm. diam.,

ramulis lateralibus crebre 4—6-foliatis; folia ascendentia vel patentia, supra plana acuta vel subobtusa, novella breviter apiculata, apiculo centrali, dorso rotundata, carina nulla vel ad lineam reducta, lateribus convexis, lat. visa apice rotundata, juvenilia superne non vel vix ampliata, maxima subclavata vel rarius subspathulata, indumento subfarinoso, cinereo vel atrato (? fungo), in siccis ceram tenuem simulante quae demum disrupta deciduaque est, ad 2 cm. longa, 5—6 mm. lata, paulo infra apicem ad 8 mm. diam., vagina 2—3 mm. longa; flores 3-nati vel 2-ternati, cyma 2.5 cm. longa; pedunculi cymarum 3 cm., ultimi 2—3 mm., fructiferi 4—6 mm., longi; bracteae basalibus, ad 7 mm. longis cum vagina 2 mm. longa; receptaculum globose obconicum, 3 mm. longum, ad 5 mm. diam.; sepala 5 (in floribus 2 dissectis) sat marcescentia, e paulo supra basim superne angustata, acuta vel subacuta, omnia $\pm$ marginata, 3—4 mm. longa, basi 2—3 mm. lata; petala nulla; staminodia ad stamina conice conferta appressa intertextaque, ea aequantia vel excedentia, cum filamentis 4-seriatis superne roseopurpurea; filamenta intima prope apicem papillata, antheris pollineque pallide stramineis; discus conspicuus, fere ad basim divisus; ovarii lobi contigui inconspicui, dorso complanati, 0.75 mm. elevati; stigmata 4 et 6 visa, anguste subulata, intus conspicue longe papillata, papillis pallidis, externe atropurpurea, 1.25 mm. longa; capsula ad 7 mm. longa diametroque, infra obconica, obtuse 5—6-angulata, ad 6 mm. longa, suturis compressis, in aperta valvis permanente erectis, carinis inconspicuis, dimidium valvae attingentibus, alis subinflexis, late oblongis, apicem valvae non attingentibus, alis tegentibus dimidium loculi attingentibus; semina echinata obovata brunnea, ca. 1 mm. longa.

South West Africa: Orangemund, Nov. 1960, *H. Hall* 2144.

The plant described was drought-stricken. A second plant now doing well at Kirstenbosch may afford matter for further noting.

***Trichodiadema stayneri*.**—Planta 1 visa, sat juvenis (in anno secundo, ut videtur), cum floribus 4 cm. alta, 7 cm. et 10 cm. diam.; caulis 5 mm. diam.; radix tuberosa, ad 7 mm. diam.; rami primarii patentes vel ascendentes, teretes, minutissime papillati, cum aetate asperuli vel fere leves, ad 6 cm. longi, internodiis 1—4 mm., vel rarius ad 10 mm., longis, 1.5—2 mm. diam.; ramuli floriferi crebre 4—8-foliati, internodiis saepe invis; folia ascendentia vel patentia, supra plana, superne angustata, obtusa vel subacuta, dorso rotundata, lat. visa superne non, vel leviter, angustata, 7—11 mm. longa, medio ad 2.5 mm. lata diametroque, papillis minutis esetiferis vel seta minutissima centrali onustis, setis terminalibus radiantibus ad 6 visis, gracillimis pallidis, facile deciduis, 1—2 mm. longis; flores meridiani; pedunculi 3—6 mm. longi; receptaculum obconicum, 3—4 mm. longum, 4—5 mm. diam., apicem versus cum basi sepa-

lorum magis conspicue papillatis; sepala 5, foliacea, 3—4 mm., 3—5 mm., vel 3—6 mm., longa, basi aequilata, 2—3 mm. lata; petala 2-seriata, e prope apicem inferne angustata, obtusa vel subtruncata, integra vel inconspicue emarginata vel denticulata, purpureo rosea, 6—9 mm. longa, apice 1·5 mm., vel rarius ad 2 mm., lata; staminodia diu appressa, superne attenuata, alba, ad 7 mm. longa; filamenta 4—5-seriata alba, ad 5 mm. longa, exteriora nuda, interiora medio papillata, antheris pollineque pallide luteis; glandulae conspicuae, contiguae vel subcontiguae, crenulatae; ovarii lobi distantes, obtuse compressi, vix ad 0·5 mm. elevati; stigmata 5, subulata viridia, in genere minima visa, 1—1·5 mm. longa cum cauda 0·5 mm.; capsula pallide brunnea, infra obconica, 4 mm. longa, supra per 1—1·5 mm. elevata, suturis ringentibus, 6 mm., expansa 9 mm., diam., cetera generis; semina pallide brunnea, levia, ca. 1 mm. longa.

Cape Province: in dit. Uitenhage; "2 miles E. of Uitenhage", Oct. 1960, *F. J. Stayner*. Karoo Garden 903/60. Fl. Nov. 1960—Jan. 1961.

Conophytum paupere (*Subrisa*).—Plantae ad 2 cm. altae, ad 6 cm. diam.; reliquiae senectae papyraceae, saturate brunneae novellissimae subpergamentaceae rugosaeque brunneae; corpuscula obovata vel anguste obovata, vel subobconica, basi rotundata, supra circularia convexa, sat pallide viridia, immaculata, 5—6 mm. longa, ad 5·5 mm. diam., ore depresso, margine pallidiore, utrinque obscure fossifero, 2—3 mm. longo; pedunculi ad 3 mm. longi, basi bracteati, bracteis obtusis, ad medium connatis, 1 mm. longis; calyx subherbaceus, superne roseus vel roseosuffusus, tubo 2—2·5 mm. longo, partim incluso, segmentis 4, obtusis subaequilongis, 1—1·5 mm. longis; corolla 7—8 mm. longa, tubo pallido, ad 3·5 mm. longo, segmentis ca. 22, superne angustatis, obtusis vel acutis, ad 0·5 mm., vel rarius ad 0·75 mm., latis, exterioribus ad 4·5 mm., interioribus 1·5—2 mm., longis; stamina 3-seriata, pauca, inferiora manifesta, superiora fere omnino exserta, filamentis pallidis vel superioribus cum antheris pollineque aureis; discus conspicuus, luteo viridis, segmentis 8, emarginatis; ovarium circa marginem concavum, medio dimidium altitudinis nectarii attingens; stylus nullus, stigmatibus 4, gracillimis, 1·5—2 mm. longis.

Cape Province: Namaqualand; "12 miles N. of Soebatsfontein," Nov. 1960, *H. Hall* 2183. N.B.G. 1028/60. Fl. Feb. 1961.

Trichodiadema obliquum.—Glabrum; rami 2 visi, ad 11 cm. longi, internodiis saepius 1—2 cm. longis, ad 1·5 mm. diam., ramulosi, crebre papillati, demum asperuli; partes herbaceae virides papillosae, papillis rotundatis esetiferis; folia ascendentia, supra plana obtusa, lat. visa

superne vix angustata oblique obtusa vel fere subtruncata, 1.5—2.5 cm. longa, medio ad 3 mm. lata diametroque, setis apicalibus subnullis vel ad ca. 6, ad 1.5 mm. longis; pedunculi graciles, prope apicem dilatati, 1—2 cm. longi; receptaculum fere semi-globosum, ad 2.5 mm. longum, ad 6 mm. diam.; sepala 5, prope apicem recurva, 3—7 mm., vel 4—8 mm., longa, basi 2—3 mm. lata, setis apicalibus subnullis vel 1—2, ad 0.5 mm. longis; petala 4—5-seriata obtusa, exteriora e medio, vel supra, inferne angustata, 5—6 mm. longa, vix, ad 1.25 mm. lata, intima erecta vel recurva, in staminodia abeuntia; filamenta alba, staminodiis breviora, ad 3 mm. longa, exteriora basi parvis ciliatis, interiora prope medium papillata (non bene visa), antheris pollineque luteis; glandulae distantes crenulatae; ovarii dimidium exterius planum, interius obtuse 5-lobatum; lobis distantibus, ca. ad 0.75 mm. elevatis; stigmata 5, subulata caudata, 2 mm. longa cum cauda 0.75 mm.

Cape Province: in dit. Beaufort West; Nelspoort, Oct. 1960, *F. J. Stayner*. Karoo Garden 773/61. Fl. Feb. 1961.

Astridia blanda.—Rami plures visi, ad 23 cm. longi, internodiis 1—3 cm. longis, 2—5 mm. diam., ramulosi, ramo ad paria 7 ramulorum secundorum floriferorum ferente; partes herbaceae velutinae, pallide virides, siccae pallide cinereae vel brunneae; folia ascendentia vel fere patentia, interdum subulata, supra plana obtusa, lat. visa semi-ovalia vel fere semi-circularia, apice rotundata, obtuse carinata, ad 3.7 cm. longa, ad 1.2 cm. lata, ad 1.5 cm. diam.; flore, solitarii, interdum quasi aggregati ob ramulos floriferos abbreviatos crebrosque apice rami confertos; pedunculi ad 7 mm. longi, apice bracteati, bracteis concavis, ad 5 mm. diam., complanatis late ovatis, acutis, ad 7 mm. longis, ad 8 mm. latis; receptaculum fere semi-globosum, 4 mm. longum, ad 9 mm. diam.; sepala 6 vel rarius 5, sat crassa, subovata, apice rotundata, 5 mm., vel in flore altero 6—7 mm. longa, basi 3—5 mm. et 4—7 mm. lata; petala 2—3-seriata, breviora pauca, inferne leviter, vel vix, angustata, obtusa vel intima acuminata, basi alba, deinde pallide pulchre rosea, 6—19 mm. longa, ad 1.5 mm. lata; staminodia sat pauca, apice recurva, stamina aequantia vel breviora; filamenta conice collecta, alba ca. 6-seriata, ad 6 mm. longa, exteriora prope basim ciliate papillata, intima infra medium papillata, antheris pollineque aureis; discus profunde divisus; ovarium circa marginem planum, medium versus abrupte 6-lobatum, lobis approximatis sat obtuse compressis, ad 0.75 mm. elevatis; stigmata 6, gracilia, ad 6.5 mm. longa; semina echinata.

South West Africa; locus ignotus, comm. *H. M. Holloway* 1. Fl. Jan. 1937.